Ann & Robert H. Lurie Children's Hospital of Chicago[®] Center for Quality and Safety



Appointment Lag Time and Tracking Transition in Young Adults

Sean DeLacey, MD; Naomi Sullivan, MEd, MS, RN, MBA; Laura Levin, DO; Naomi R. Fogel, MD

Ann & Robert H. Lurie Children's Hospital of Chicago Division of Endocrinology Center for Quality and Safety November 14, 2023



Disclosures

• I have no relevant financial or non-financial disclosures





Lurie Children's Hospital Diabetes Program

- Main campus downtown Chicago
 - 8 suburban satellites
- Diverse T1D population
 - ~26% Hispanic, ~56% White/Non-Hispanic, ~8% Black/Non-Hispanic
- ~40-50% Medicaid
- ~1200 T1D patients (~400 with T2D)
- T1D Exchange QI Collaborative since Jan 2021
- Diabetes Team
 - 12 Physicians, 4 Fellows, 1 Nurse Practitioner (hiring 2 additional), 13 RN/CDCES, 3 RD/CDCES, 2 Psychologists, 2 Social Workers



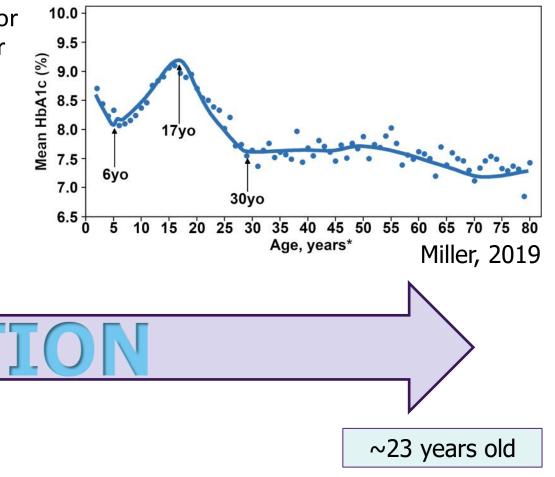




Transition in Type 1 Diabetes

- Transfer from pediatric to adult providers is a sensitive time for Type 1 Diabetes care and is part of a transition process (Miller 2019, Benoit 2020)
- If transition is not appropriately discussed, transfer of care is often frustrating (Varty 2020)
- Delay in transfer can lead to gaps in care and sub-optimal outcomes (Cardario 2009)
- Racial/ethnic disparities exist in outcomes for young adults with Type 1 Diabetes (Agarwal 2020)

Transfer of Care





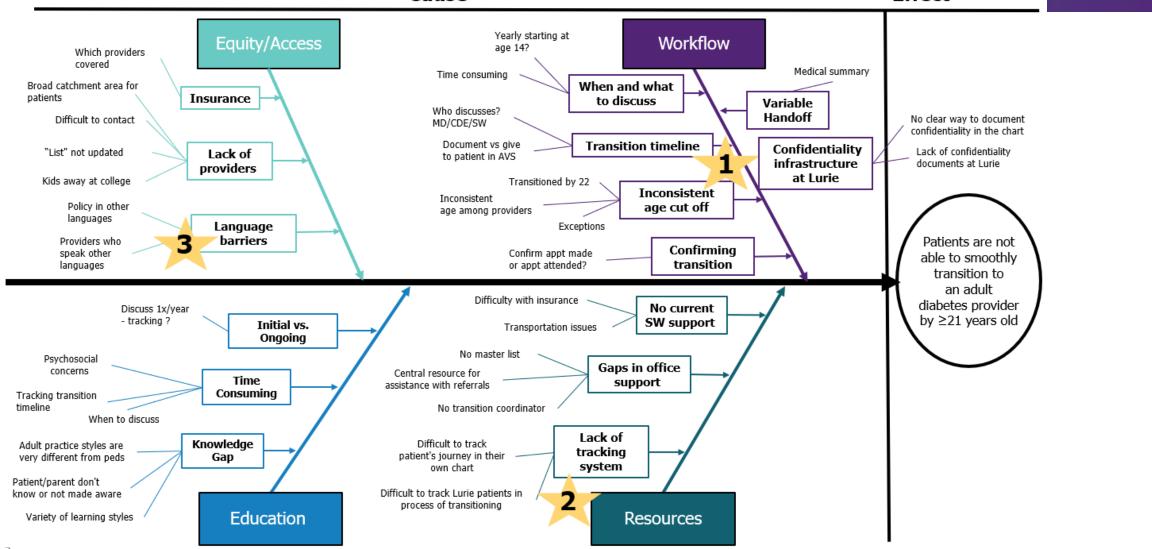
~14 years old



Effect

T1D Transition Fishbone Diagram

Cause



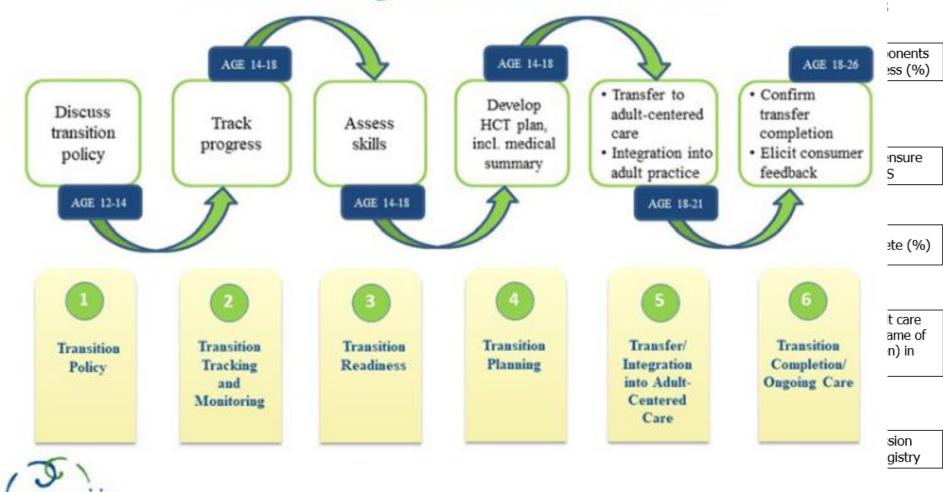
Ann & Robert H. Lurie Iren's Hospital of Chicago Center for Quality and Safety lete paress

: started

T1D Exc

1. Decrease the number of Type diabetes patien 21 years old wh are seen each month in pedia endocrinology I 10% by 12/31/ 2. Decrease the ti between the la pediatric visit a the first adult v (new interventi no baseline dat and increase th number of patie with a complete adult appointm each month by 10% by 12/31/ 3. Increase the discussion of transition durin clinic appointm for patients ≥ 1 years old (new intervention; no baseline data) 12/31/2023

Six Core Elements[™] Approach for Youth Transitioning to Adult Health Care



Got TransitionTM created The Six Core Elements of Health Care TransitionTM under HHS/HRSA grant number U39MC25729.



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Development and Implementation: PDSA 1 &2

Endocrinology Medical Transition Policy

Medical transition from adolescence to adulthood is a journey that culminates in the eventual transfer of care to adult physicians. Lurie Children's Division of Pediatric Endocrinology values the importance of preparing youth for a smooth transition to adult health care. This involves a collective effort between you the patient, the medical team, and your family beginning around age 14. Patients in our practice will transfer their medical care to adult providers sometime between 18 and 20 years of age, but no later than age 21. We will work with you and your family to develop an individualized plan.

While in pediatric care the parents make most of the decisions, in adult health care the patients make their own medical decisions. To help get ready for adult care, we will spend some time alone with adolescent patients without the parent/care-giver present starting at age 14 or patients. This is important to allow adolescent patients to be a set of the parent of

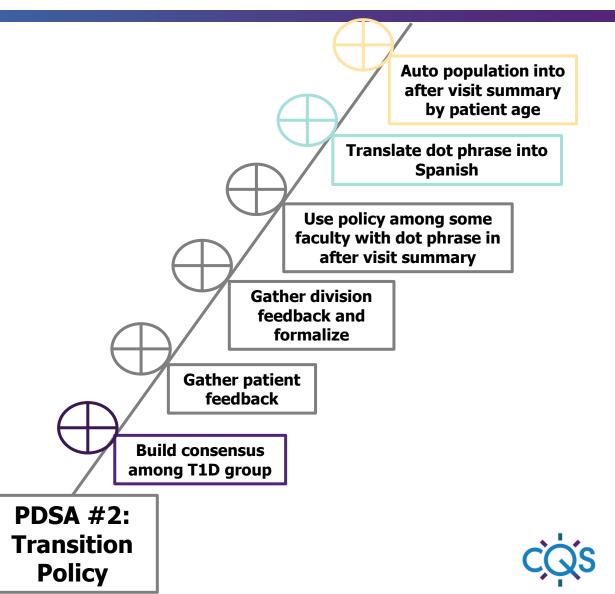
earlier. This is important to allow adolescent patients to become more independent in their own health care.

By law, adulthood begins at age 18. We will only discuss your health information with others if you agree. To allow your doctor to share information with your parents or others, consent is required. We have these consent forms at our practice. For young adults who have a condition that limits them from making health care choices, our office will share with parents/care-givers options for how to support decision-making. For young adults who are not able to consent, we will need a legal document that describes the person's decision-making needs.

A successful transfer of care includes assessing your readiness to take over your own care, granting you increasing responsibility, and supporting you as you take on these new skills. It also means researching who and where you would like to transfer care early on so that information can pass smoothly between medical providers.

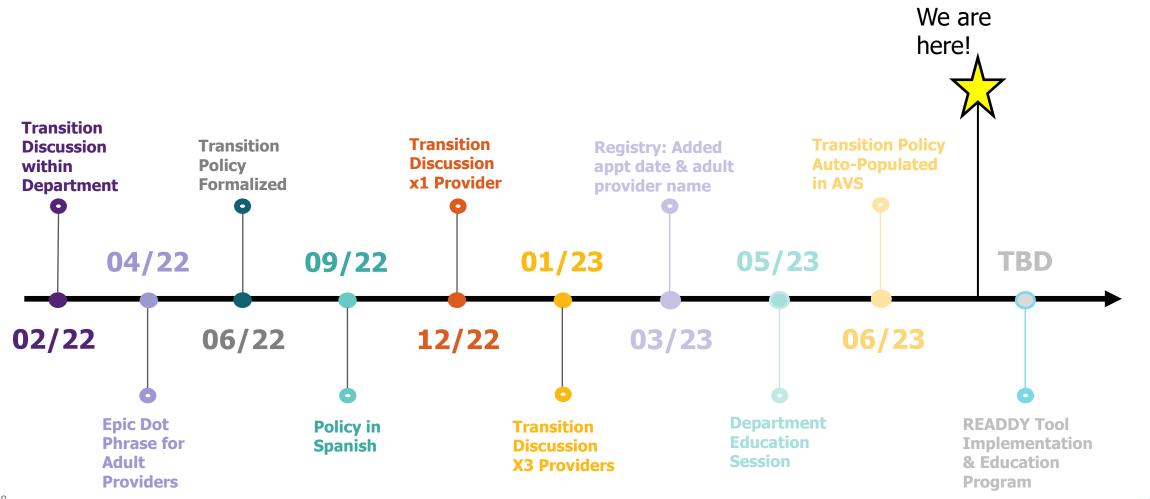
We look forward to working with your family toward a successful transition during these exciting years.

The Members of the Division of Pediatric Endocrinology.



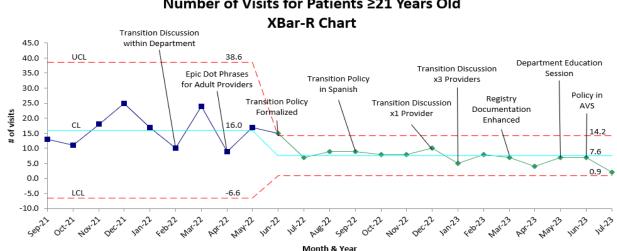


Implementation Timeline





Results- Transfer of Care



Number of Visits for Patients ≥21 Years Old

Aim #1: The number of patients \geq 21 years old seen each month decreased from 16 to 7.6 visits per month (47.5% decrease)

Number of Adult Provider Appointments Completed XBar-R Chart Department Education Transition Discussion x3 Epic Dot Phrases Transition Policy Providers for Adult Providers in Spanish Transition Discussion Transition Transition Policy x1 Provider

Session Registry Documentation 10.2 Enhanced Policy in AVS Discussion within Formalized Department 4.0 UCL 3.5 💊 0.9 LCL -2.2 Jun-23 Jul-23 lar-22 Sep-22 an-22 eb-22 Apr-22 May-22 Jun-22 Jul-22 Aug-22 Oct-22 lov-22 Dec-22 lan-23 Feb-23 Aar-23 Apr-23 May-23

Month & Year

Aim #2: The number of patients with a completed adult appointment increased from 0.9 to 3.5 completed appointments per month (25.7% increase)



12.0

11.0

10.0

9.0

8.0

7.0

4.0

3.0 comple 2.0

1.0 ž 0.0 -1.0

-2.0

-3.0

-4.0

appoint 6.0 5.0



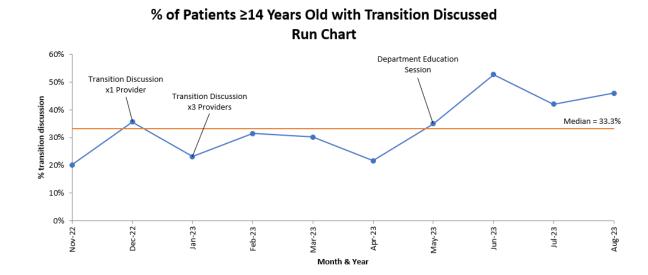
Results-Process Metrics and Balancing Metric

Summary of patient characteristics by transition status,

population includes all patients \geq 20 years old in the diabetes registry as of 7/31/23

	Transitioned (n=83)	Not Transitioned (n=109)
Age (median, IQR)	21 years (20-21)	20 years (20-21)
Females (n, %)	41 (49.3%)	54 (49.5%)
Last HgbA1C (median, IQR)	7.7% (6.9-9.7)	7.8% (7.0-9.1)
Lag Time to Adult Appt in months (mean and standard deviation)	4 (2-8)	NA

Aim #2: Those who transitioned to adult providers did so at an average of 4 months after their last pediatric visit



Aim #3: The number of times that transition discussion occurred in clinic increased over time, though there is no baseline data available





Lessons Learned and Next Steps

- Relatively simple interventions and awareness can have a big impact
- Consensus building is a first step for laying the groundwork for improvement
- Next Steps
 - -Transition questionnaire
 - -Curriculum Development
 - -Adding equity component to registry for tracking





Thank you!

- Naomi Fogel MD, Laura Levin DO, and Naomi Sullivan MEd, MS, RN
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- Lurie patients



REFERENCES

12

- Shivani Agarwal, Lauren G Kanapka, Jennifer K Raymond, Ashby Walker, Andrea Gerard-Gonzalez, Davida Kruger, Maria J Redondo, Michael R Rickels, Viral N Shah, Ashley Butler, Jeffrey Gonzalez, Alandra S Verdejo, Robin L Gal, Steven Willi, Judith A Long, Racial-Ethnic Inequity in Young Adults With Type 1 Diabetes, *The Journal of Clinical Endocrinology & Metabolism*, Volume 105, Issue 8, August 2020, Pages e2960–e2969, https://doi.org/10.1210/clinem/dgaa236
- 2. Miller KM, Beck RW, Foster NC, Maahs DM. HbA1c Levels in Type 1 Diabetes from Early Childhood to Older Adults: A Deeper Dive into the Influence of Technology and Socioeconomic Status on HbA1c in the T1D Exchange Clinic Registry Findings. Diabetes Technol Ther. 2020 Sep;22(9):645-650. doi: 10.1089/dia.2019.0393. PMID: 31905008; PMCID: PMC7640747.
- 3. Varty M, Speller-Brown B, Phillips L, Kelly KP. Youths' Experiences of Transition from Pediatric to Adult Care: An Updated Qualitative Metasynthesis. J Pediatr Nurs. 2020 Nov-Dec;55:201-210. doi: 10.1016/j.pedn.2020.08.021. Epub 2020 Sep 20. PMID: 32966960; PMCID: PMC7722194.
- 4. Stephen R. Benoit, Israel Hora, Francisco J. Pasquel, Edward W. Gregg, Ann L. Albright, Giuseppina Imperatore; Trends in Emergency Department Visits and Inpatient Admissions for Hyperglycemic Crises in Adults With Diabetes in the U.S., 2006–2015. *Diabetes Care* 1 May 2020; 43 (5): 1057–1064. <u>https://doi.org/10.2337/dc19-2449</u>
- Cadario, F., Flavia Prodam, Simonetta Bellone, M. Trada, M. Binotti, M. Trada, G. Allochis et al. "Transition process of patients with type 1 diabetes (T1DM) from paediatric to the adult health care service: a hospital-based approach." *Clinical endocrinology* 71, no. 3 (2009): 346-350. Cadario, F., Flavia Prodam, Simonetta Bellone, M. Trada, M. Binotti, M. Trada, G. Allochis et al. "Transition process of patients with type 1 diabetes (T1DM) from paediatric to the adult health care service: a hospital-based approach." *Clinical endocrinology* 71, no. 3 (2009): 346-350. Cadario, F., Flavia Prodam, Simonetta Bellone, M. Trada, M. Binotti, M. Trada, G. Allochis et al. "Transition process of patients with type 1 diabetes (T1DM) from paediatric to the adult health care service: a hospital-based approach." *Clinical endocrinology* 71, no. 3 (2009): 346-350.

Multi-Center Quality Improvement Project: Increasing Documented Transition Plan Across Three Sites in the TID Exchange Learning Collaborative

Author: Trevon Wright MHA1; Ori Odugbesan MD, MPH1; Donna S. Eng, MD2; Britni A. Schipper3; Jeniece Ilkowitz RN, CDCES3 Emily DeWit MASL4; Osagie Ebekozien, MD, MPH1,5

Affiliations: 1)T1D Exchange; 2) Spectrum Health, Helen Devos 3) Hassenfeld Children's Hospital at NYU Langone; 4) Children's Mercy Kansas City, 5) University of Mississippi Medical Center School of Population Health Jackson MS

Disclosure

• None



TID Exchange Quality Improvement Collaborative (TIDX-QI)

- The TID Exchange is a Bostonbased nonprofit with a mission to improve the outcomes of people with TID (1).
- TID Exchange Quality Improvement Collaborative (TIDX-QI) is a learning network that has expanded to 55 clinical centers caring for 100,000+ people with TID (PwTID) across 22 US States.





Background

- Young adults with TID can be at risk for poor glycemic control and adverse health outcomes (2).
- Transition planning improves the quality of care for adolescents and young adults living with TID as they move from pediatric to adult diabetes healthcare providers (3).
- Our aim was to increase documented transition planning at the participating sites in the TIDX-QI.
- Documented transition planning plays a key role in the quality of care for PwTID who are transitioning from pediatric to adult healthcare providers (3).
- Studies have shown improved outcomes with transition planning for PwTID (3).



Methodology

- Three TIDX-QI sites: Spectrum Health, Helen Devos, Hassenfeld Children's Hospital at NYU Langone, and Children's Mercy Kansas City utilized QI methodologies to document transition readiness using the READDY assessment tool.
- Monthly data was shared with the TID Exchange coordinating office using a secure collaborative spreadsheet (www.smartsheet.com).
- Multiple plan-do-study-act (PDSA) cycles were used to develop and expand interventions to increase the proportion of PwTID with documented transition plans

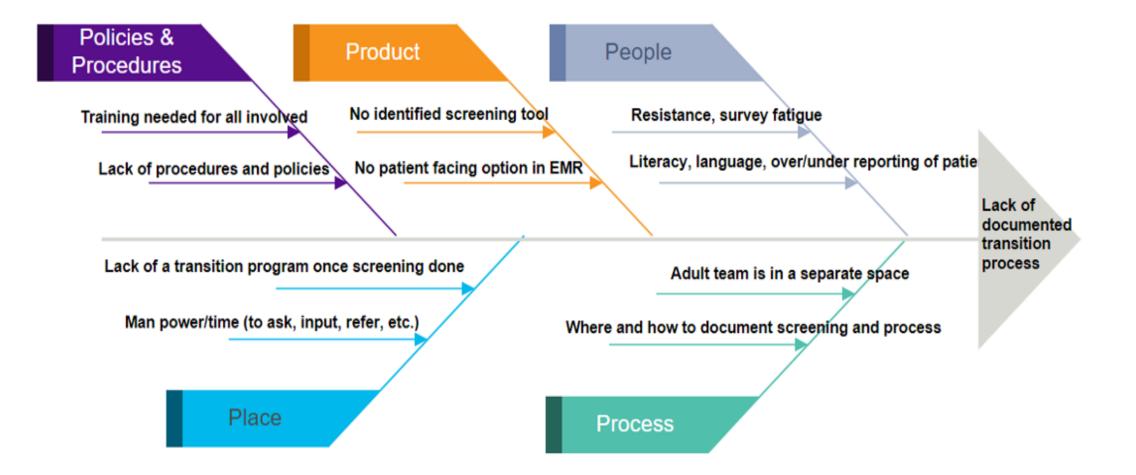


Interventions Tested

- The participating sites tested the following interventions:
 - Provider assignment with a Medical Assistant (MA) and a Certified Diabetes Care and Education Specialist CDCES. In this process, the MA identifies and flags patients eligible for transition planning with the CDCES.
 - Integration of the READDY tool into the Electronic Medical Record.
 - Utilization of RedCap to generate a QR code that was sent to PwTID ahead of visit.
 - Collaboration with adult clinics to facilitate the referral process.
 - The use of a multidisciplinary team approach including dieticians, social workers, and CDCES and review of reports quarterly.

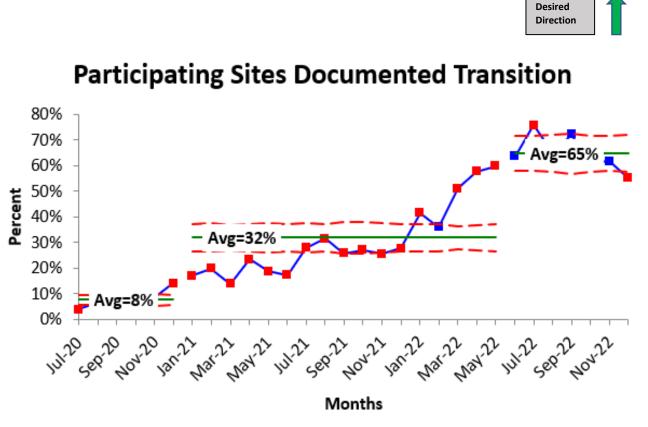


Fishbone Diagram- Transition Documentation in the Young Adult





Results



• Overall improvement ranged from 27% to 86%. Overall screening using the READDY tool increased from 8% to 65% in 29 months (Figure 1).

Jul- 20	Aug- 20	Sep- 20	Oct- 20	Nov- 20	Dec- 20	Jan- 21	Feb- 21	Mar- 21	Apr- 21	May- 21	Jun- 21	Jul- 21	Aug- 21	Sep- 21	Oct- 21	Nov- 21	Dec- 21	Jan- 22	Feb- 22	Mar- 22	Apr- 22	May- 22	Jun- 22	Jul- 22	Aug- 22	Sep- 22	Oct- 22	Nov- 22	Dec- 22
262	273	222	202	199	233	218	202	258	210	182	225	179	229	159	167	188	221	231	222	323	262	226	283	283	269	218	271	285	265
10	18	13	15	17	33	37	40	36	49	34	39	50	72	41	45	48	61	96	80	165	151	135	180	214	174	157	165	176	146



Conclusions

- QI methodologies are feasible and useful in testing, scaling and implementing, documentation of transition planning in diabetes clinics.
- The use of the READDY Assessment in pediatric diabetes clinics enables providers to identify barriers that PwTID face that could have gone undiscovered.
- READDY Assessment is a feasible patient-reported tool in transition planning.



References

- Alonso, T, Corathers, S, Shah, A, Clements, M, Kamboj, M, Sonabend, R, DeSalvo, D, Mehta, S, Cabrera, A, Rioles, N, Ohmer, A, Mehta, R, Lee, J. Establishment of the TID Exchange Quality Improvement Collaborative (TIDX-QI) https://doi.org/10.2337/cd19-0032.
- 2. Garvey, K.C., Markowitz, J.T. and Laffel, L.M., 2012. Transition to adult care for youth with type 1 diabetes. Current diabetes reports, 12, pp.533-541.
- 3. Markowitz, J.T. and Laffel, L.M.B., 2012. Transitions in care: support group for young adults with type 1 diabetes. Diabetic medicine, 29(4), pp.522-525.3) Hilliard, M.E., Perlus, J.G., Clark, L.M., Haynie, D.L., Plotnick, L.P., Guttmann-Bauman, I. and Iannotti, R.J., 2014.
- 4. Perspectives from before and after the pediatric to adult care transition: a mixedmethods study in type 1 diabetes. Diabetes care, 37(2), pp.346-354.





Utilizing Quality Improvement to Reduce Loss to Follow-up in Pediatric Patients with Type 1 Diabetes

Meenal Gupta, MD Nov 14, 2023



Seattle Children's

Background

- Regular ambulatory diabetes visits offer opportunities for individualized education and development of tailored treatment plans to support the management of T1D
- Higher rates of clinic visit attendance are associated with lower HbA1c levels
- Meeting ADA-recommended quarterly clinic visit frequency remains challenging

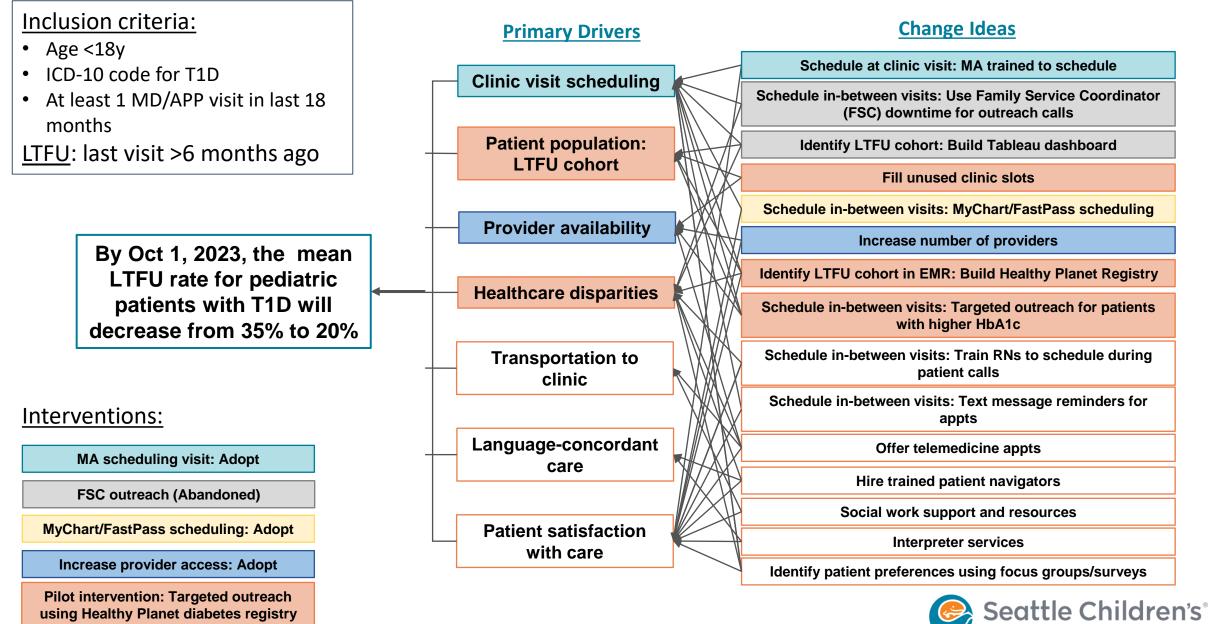
SMART Aim

 Reduce the mean loss to follow-up (LTFU) rate for our pediatric patients with T1D from a baseline of approximately 35% to 20% by 18 months



KEY DRIVER DIAGRAM

OSPITAL • RESEARCH • FOUND



Patient Demographics

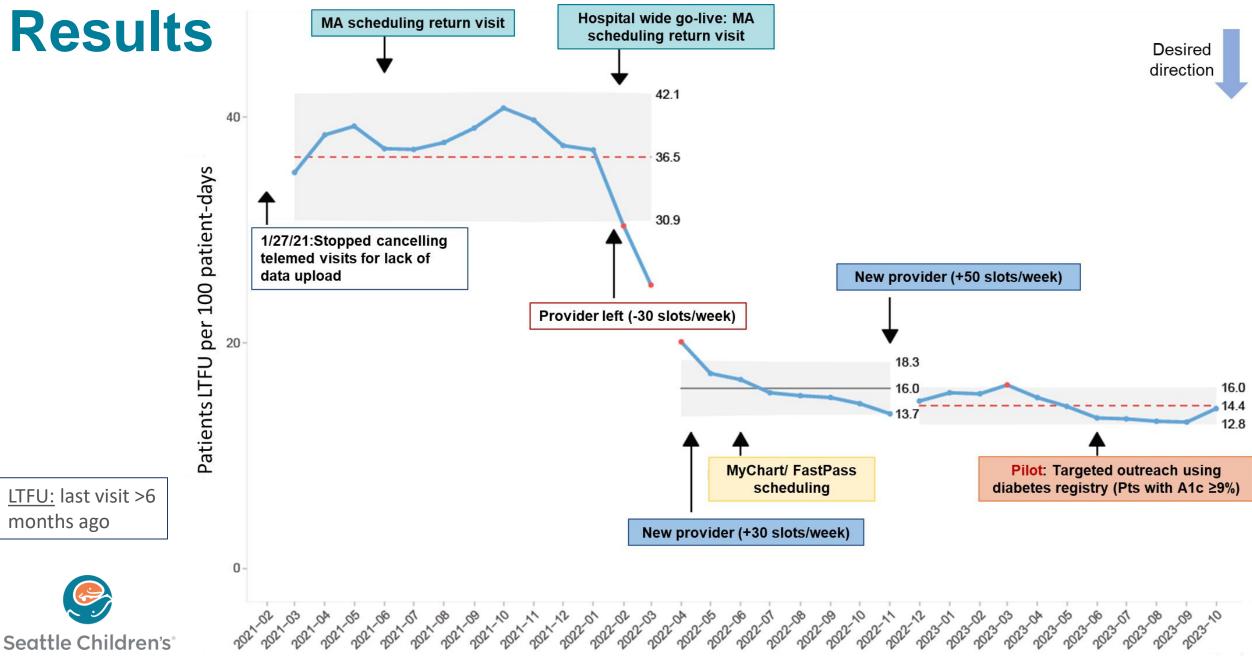
	All, n (%)	LTFU, n (%)
Ν	2427	501 (20.6)
Age, Years		
0-5	221 (9.1)	27 (5.4)
6-12	1060 (43.7)	215 (42.9)
13-17	1146 (47.2)	259 (51.7)
Sex		
Female	1167 (48.1)	248 (49.5)
Male	1259 (51.9)	253 (50.5)
Non-Binary	1 (0.0)	0 (0.0)
Race/Ethnicity		
2 or more races	104 (4.3)	14 (2.8)
Asian	99 (4.1)	21 (4.2)
Black or African American	177 (7.3)	39 (7.8)
Hispanic	329 (13.6)	55 (11.0)
Native Hawaiian/Pacific Islander/American Indian	13 (0.5)	3 (0.6)
Non-Hispanic White	1491 (61.4)	318 (63.5)
Other/Unknown/Refused	214 (8.8)	51 (10.2)



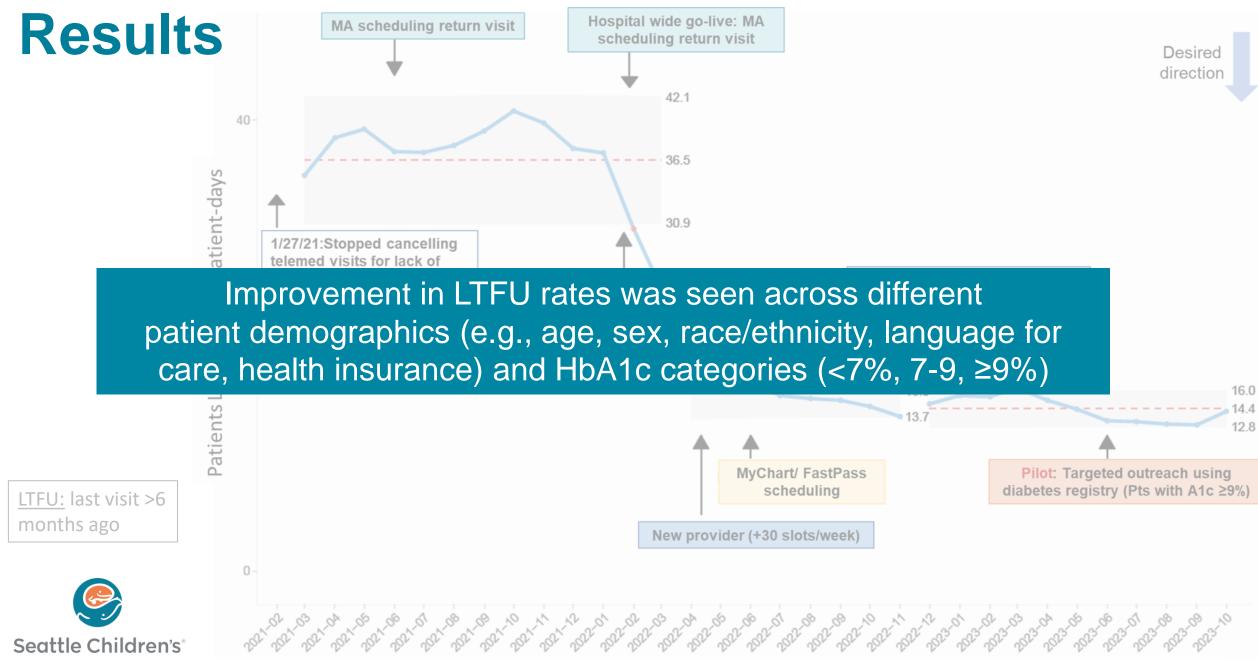
Patient Demographics

	All, n (%)	LTFU, n (%)
N	2427	501 (20.6)
Language for Care		
English	2243 (92.4)	464 (92.6)
Spanish	97 (4.0)	15 (3.0)
Other	87 (3.6)	22 (4.4)
HbA1c		
<7%	287 (14.2)	29 (9.3)
7-9%	846 (41.8)	127 (40.6)
≥ 9%	890 (44.0)	157 (50.2)
Health Insurance		
Private Insurance	1413 (58.2)	242 (48.3)
Public Insurance	935 (38.5)	204 (40.7)
Self Pay	79 (3.3)	55 (11.0)

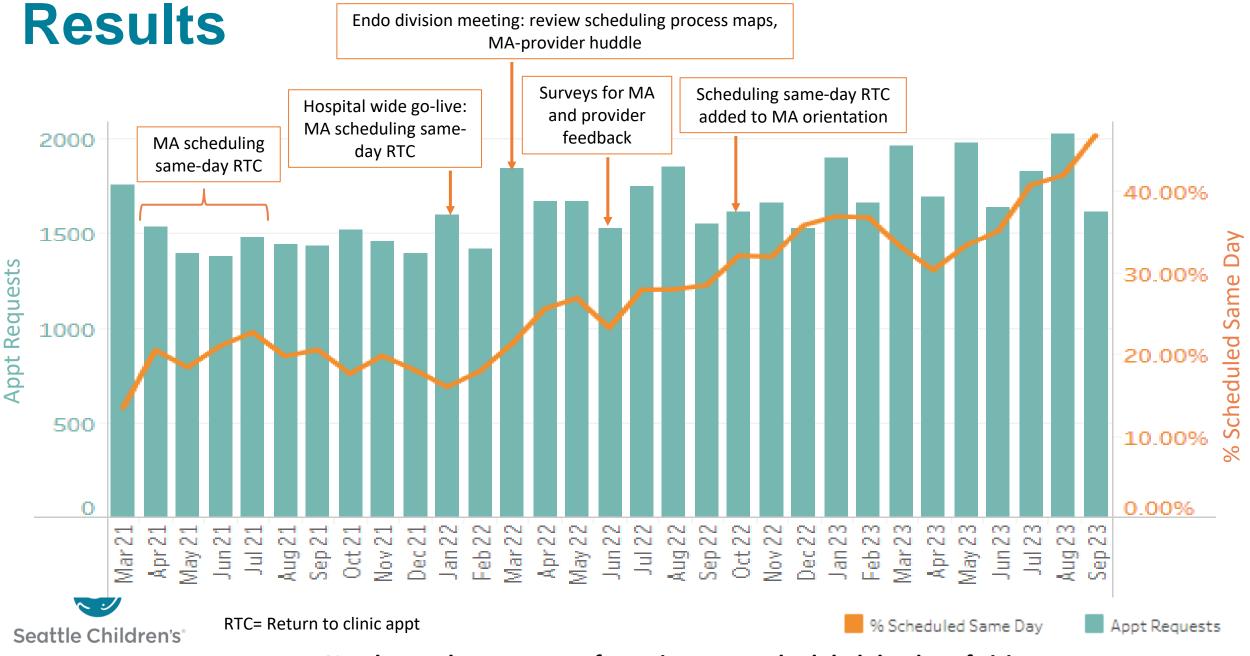




Mean LTFU rate over time

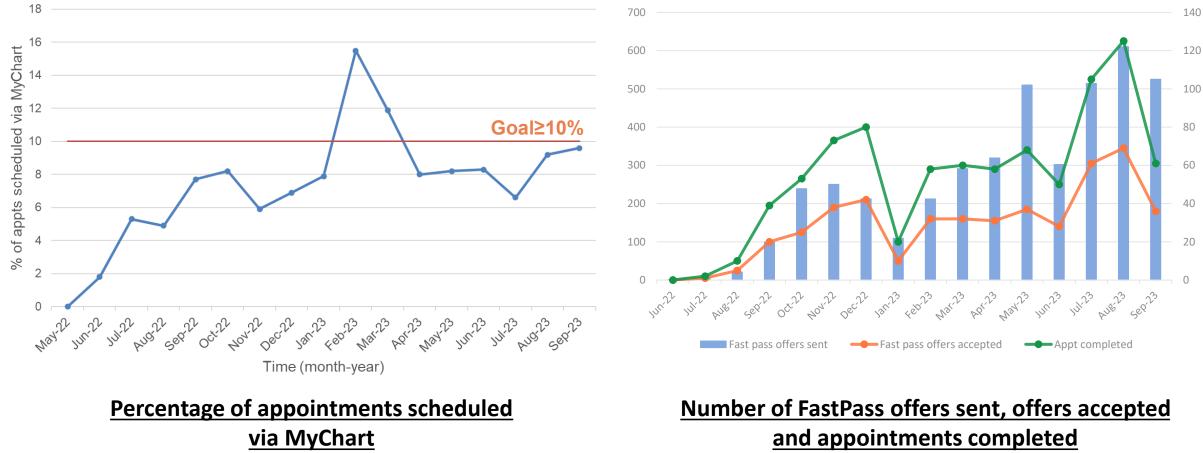


Mean LTFU rate over time



Number and percentage of appointments scheduled the day of visit

Results





Conclusions

- Improving scheduling processes and visit access using QI methodology resulted in reduced LTFU rates for our pediatric patients with T1D
- Significant improvement in LTFU rates was seen across all patient demographics and HbA1c categories

Next Steps

 Use our Healthy Planet Diabetes registry to identify LTFU patients with A1c ≥ 9% and prioritize outbound scheduling calls to these patients to fill empty clinic slots



Next Steps

Diabetes Healthy Planet Registry -

Diabetes Type 1

Type 1 - High Risk HbA1c

Type 1 - High Risk IP/ED Admits

Last Refresh: 05:09:20 PM

Type 1 - Patients by Age 🖉

Type 1 - Sex

Type 1 - Due for HbA1c

Type 1 - Due for Clinic Appt

Last Refresh: 05:09:38 PM



Diabetes Registry Patients - Type 1_MG [7920178] as of Thu 10/26/2023 5:20 PM

24

Filter & Clear All Filters					Re-run Rep	ort 2 Refresh	Selected Select /
oose a column to filter Age From 0	• ?	▼ Last Endo MD/APP Visit Date	Last MD/APP Visit Provider	▼ Next Appt Date	Next Appt Dept	Pt Has Active Endo Appt Req. (Provider Requested)	Last Endo MD/AF Visit Dept
To 18 To Last Endo MD/APP Visit Date	ŵ	02/16/2023	Sara G Benitez, PA-C			Yes	ENDBCSC
From 4/26/2022 (M-18) To 4/26/2023 (M-6)	ŵ	01/31/2023	Vanessa Bruce Waldrep, ARNP			Yes	ENDNOR
 Last HbA1c Value From 9 To 14 	Û	03/27/2023	Jessica Tashay Johnson, ARNP			Yes	ENDSOU
Add Another Filter		03/13/2023	Kearstyn Ann Leu, ARNP,MPH			Yes	ENDSOU
		05/05/2022	Erin M Alving, ARNP			No	ENDSPC
		02/07/2023	Elena K Martinez, PA-C			Yes	ENDSPC
		11/30/2022	Elena K Martinez, PA-C			Yes	ENDSPC

Thank You

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- Practice Manager: Joy Briggs
- QI Program Manager: Yasi Mohsenian
- Statistical support: Kristy Carlin
- Data Analyst: Noah Espinoza
- SCH diabetes clinic leadership team
- SCH diabetes clinical care team





Endo Faculty Sailing Adventure





Improving Diabetic Retinopathy Screening and Documentation in Youth with Diabetes

Isabella Niu, MD*; Fatema S. Abdulhussein, MD*; Priya Srivastava, MD; Tina Y. Hu, MD; Barbara Liepman, RN MS, CDCES; Jenise C. Wong, MD, PhD

*Co-authors

Division of Endocrinology, Department of Pediatrics, University of California, San Francisco, San Francisco, CA, USA



- Diabetic retinopathy (DR) is the most common cause of preventable blindness and visual impairment in young adults
- Screening guidelines (ADA and ISPAD) exist, however, screening rates remain low
- Fundus photography has been recommended to improve access to DR screening



Baseline Data and Objective

DR screening rate in youth < 18 years old with T1D and T2D seen at UCSF Benioff Children's Hospital San Francisco Pediatric Diabetes Clinic was 3.5%.

2019

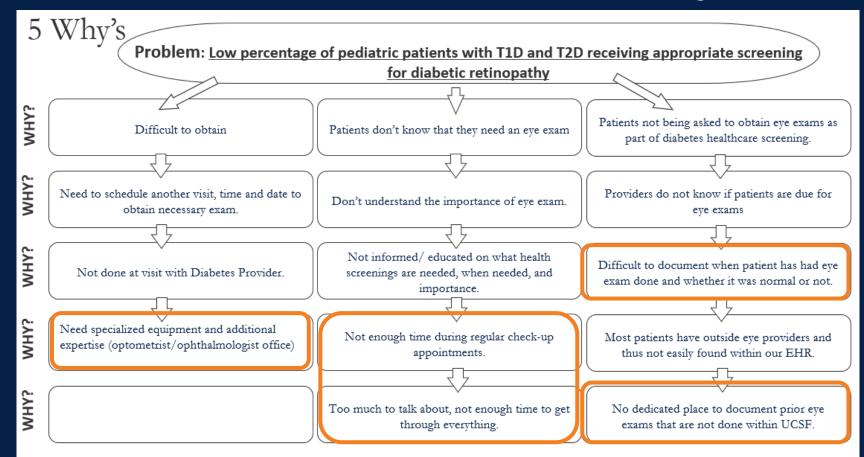






Methods

• Assessed barriers and root causes for low DR screening rates





Methods

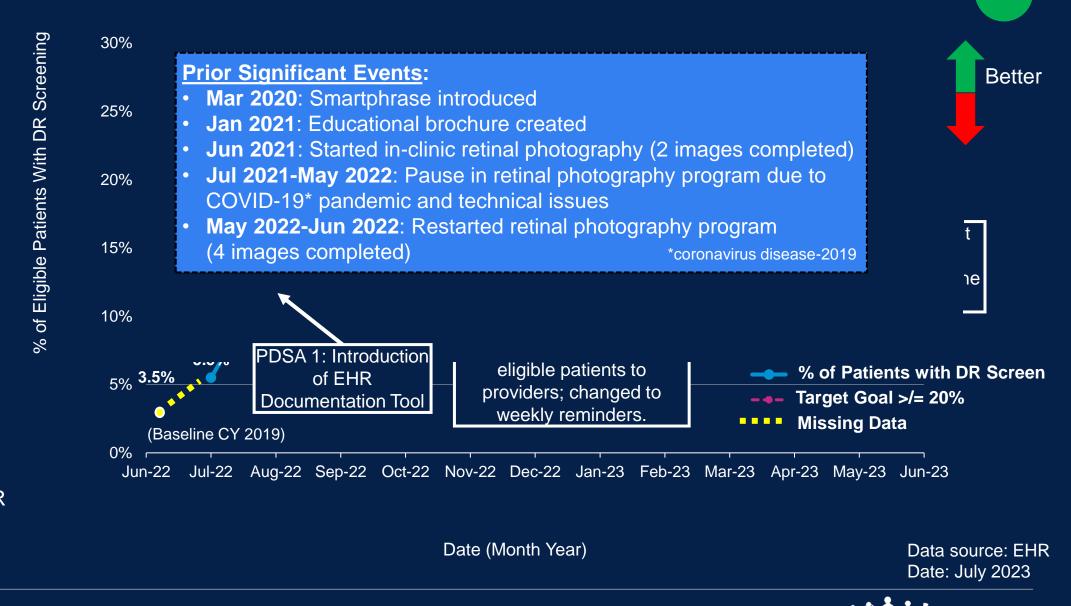
• Assessed barriers and root causes for low DR screening rates





Results

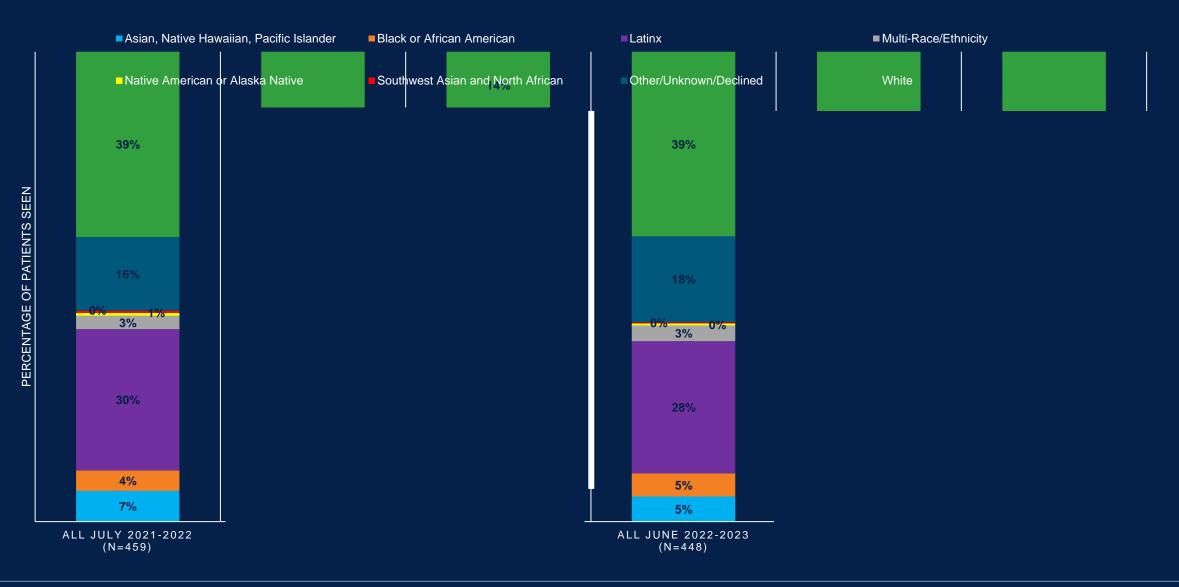
Figure 1: Annotated line graph of the percentage of eligible patients with T1D and T2D with completed DR screens within the past 2 years.



UCSF Benioff Children's Hospitals

35%

RACE/ETHNICITY OF ALL PATIENTS SEEN AT PEDIATRIC DIABETES CLINIC COMPARED TO THOSE WITH EYE EXAMS





Conclusions

By implementing an in-clinic telemedicine retinopathy screening program, educating patients and providers on DR, implementing EHR tools, and improving EHR documentation, the DR screening rate among those \leq 18 yo with T1D and T2D in our Pediatric Diabetes clinic increased from a baseline rate of 3.5%* in 2019 to 32.9% by June 2023.

*Note: in 2019 data only looked at those <18 yo



Workflow





Ophthalmologist reads images remotely.



Nikon

Fundus photography

performed by MA

Provider talks to patients about DR & in-clinic fundus photography.



Front desk calls and schedules patient.

Provider places order and notifies front desk.











BlueCross BlueShield

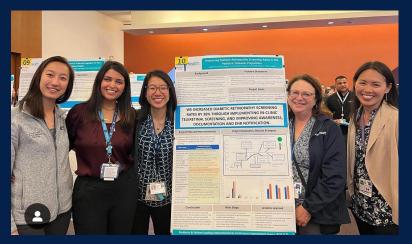
Front desk verifies insurance coverage/authorization requirements.



Special Acknowledgements

Fatema S. Abdulhussein, MD Priya Srivastava, MD Tina Y. Hu, MD Barbara Liepman, RN MS, CDCES Jenise C. Wong, MD, PhD Maanasa Indaram, MD Taruna Verma **Bessy Merino** Nancy Lei Mamatha Yerram

Funding: UCSF President's Innovation Fund









Sustained quality improvement implementation of a transition preparation program for adolescents and emerging adults with type 1 diabetes

Sarah D. Corathers, MD; Rajvi Desai, LSW; Alison Deisinger, RD, CDCES; Rachael Jones, MSW, LISW; Kyle Kaplan MPH; Mary Jolly RN, MBA, CPHQ; Amy Grant, RN, Jessica C. Kichler CDCES, PhD, CPsych





Background and Methods:

- The purpose of this quality improvement (QI) initiative is development and maintenance of a pediatric T1D transition program for adolescents and emerging adults (AEA) graduating to adult care.
- A multidisciplinary QI team identified key drivers and interventions consistent with Got Transition guidelines (<u>www.gottransition.org</u>)
- SMART aim to increase % AEA with documented transition plan by 20%/year over baseline in ages 16-18 and by 40%/year for ages \geq 19
- Post-transfer outcomes tracked in convenience samples



Longitudinal Diabetes Transition Planning:

Sarah D. Corathers, 01.2016

	s a future with diabe Age 12: Shared rea			
Goal: recognition that			ment of independer	
diabetes extends beyond childhood and there is a future	Goal: Child increases participation of		Age 18-24: Plannir	
with diabetes	diabetes self- management with	Goal: Further development of	Goal: Individualize plan	Adult Care
	caregiver and provider	diabetes self- management and health navigation skills	for transition from 'pediatric to adult care	 Goals: Confidence and competence in self-management Established care with adult provider Improved quality of life and clinical outcomes
Providers:	Discuss role of patient and parent in care; offer time alone with provider	Ongoing anticipatory guidance, screening and prevention topics	Complete indicated screening; treat identified co-morbidities	
Education Team:		Determine interventions based on patient self-assessment	Track ongoing progress of skill acquisition; update transition plan	
Fransition Coordina	ator:	Readiness assessment during annual visits ; document transition plan	Identify specific timeline and provider for transfer of care	Contact point for adult providers; follow up to ensure successful transfer

CCHMC Diabetes Center Transition Guidelines

Most patients transfer to adult care between ages 18-24, transition plans will be individualized.

- At diagnosis, patients and families learn that diabetes is a lifelong condition
- At early adolescence, *around age 12, patients should be offered alone time* with the physician, nurse practitioner or education team staff.
- *At age 15*, the diabetes care team will work with patients and families to develop a transition care plan that can be updated over time. An annual transition readiness assessment will help direct educational interventions.
- *At age 18*, patients legally become adults. Young adults may provide consent to allow discussion of personal health information with family members.
- All patients, regardless of age are encouraged to involve supportive family, friends and significant others in health care visits and living with diabetes.



Transition Readiness Assessment



READDY Transition to Adult Type 1 Diabetes Care How ready are you?

Transition Readiness assessment for Emerging Adults with Diabetes Diagnosed in Youth

Listed below are some knowledge and skills that are useful in keeping you healthy with diabetes over your lifetime. This is not a test. There are not right or wrong answers. Please try to answer honestly. Be sure to ask your provider if you need more help in any of these areas.

Knowing the facts about diabetes (Knowledge) I am able to:	Yes, I can do this	Somewhat, but I need a little practice	No, I still need lots of practice	l plan to start	Haven't thought about it
Describe diabetes in my own words					
Explain what Hemoglobin A1c (HbA1c) measures					
Recall my most recent HbA1c					
State my target HbA1c					
Understand my current health status					
Describe three long-term problems that might come from high HbA1c					
Teach a friend or roommate about signs of hypoglycemia					
Teach a friend or roommate about treatment of hypoglycemia, including use of Glucagon					
Tell someone how alcohol effects blood glucose					
Explain long-term impact of tobacco on heart health in people with diabetes					
Explain the impact of diabetes on sexual health/function					
Explain the impact of glucose control before and during pregnancy (female patients)					
List examples of tests done in routine visits to identify or prevent complications of diabetes					

1200	
· · ·	
>16 years	
Yes	
Yes, ac	
Annu: 🗋 🔎	
	>16 years Yes Yes, ac

	Select Multiple Options: (F5)
ļ	Annual dilated eye exam (retinopathy screening)
ļ	Blood pressure control (hypertension screening)
ļ	Cholesterol goals (lipid screening)
Į	Foot care and/or exam (neuorpathy screening)
l	Microalbumin screening (nephropathy screening)
ļ	Comment (F6)
l	

	1200	
Age		
Age Range	>16 years	
Discussed role of patient and parent/guardian in care	Yes	
Offered patient time with provider without parent/guardian present	Yes, ac	
Screening and Prevention Topics Discussed	Annual	
Anticipatory guidance topics discussed	Drivin 1,2	
Discussed transition to adult care		

	Select Multiple Options: (F5)
I	Driving safety
l	Family planning/ Glucose control in pregnancy
l	Importance of exercise
l	Medical alert item (bracelet, wallet card, etc)
l	Social supports who know about diabetes
l	Tobacco avoidance
l	Comment (F6)
ľ	

	1200	Select Multiple Options: (F5)
Age		Yes
Age Range	>16 years	No
Discussed role of patient and parent/guardian in care	Yes	N/A
Offered patient time with provider without parent/guardian present	Yes, ac	Comment (F6)
Screening and Prevention Topics Discussed	Annual	
Anticipatory guidance topics discussed	Driving s	
Discussed transition to adult care	Yes	

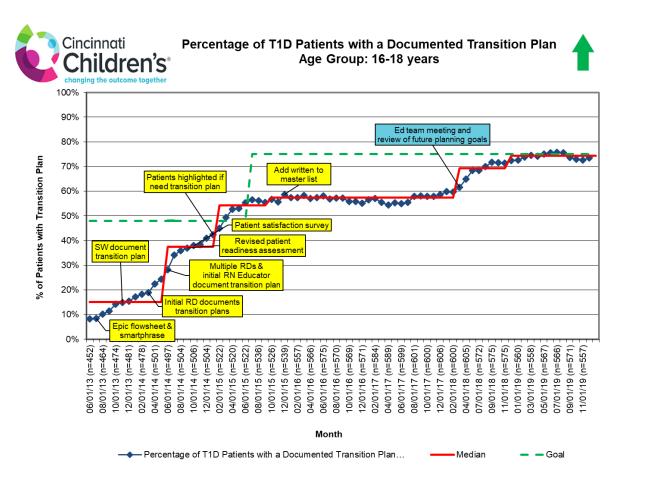
Transition Plan

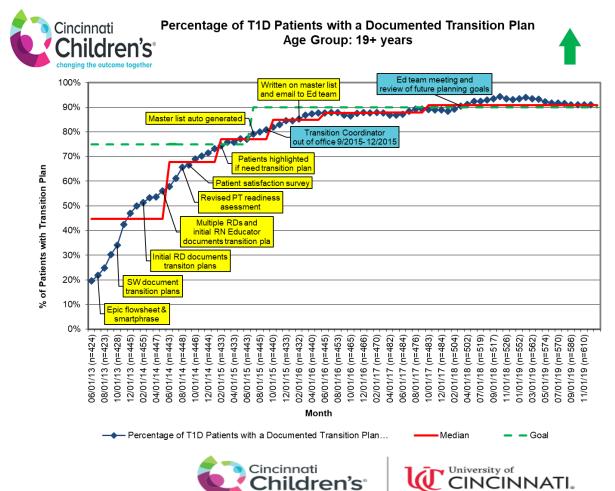
		Office Visit from 8/31/20
Search (Alt+Comma)	Q	0900
Transition Planning		
Completed readiness assessment		<u>D</u> ,2
Transition Plan in Place		
Adult Provider		
Other - see comments		
Date referral made		
Date of Adult visit		
Transfer complete?		
Education		
Hypoglycemia and Glucagon		
Alcohol and Blood Glucose		
Calling the Diabetes Center		
Refilling a Prescription		
Emergency Care and Primary Care Provider		
Preparing for College		
Giving Insulin via Syringe or Pen		
Driving Guidelines		
Managing Illness		



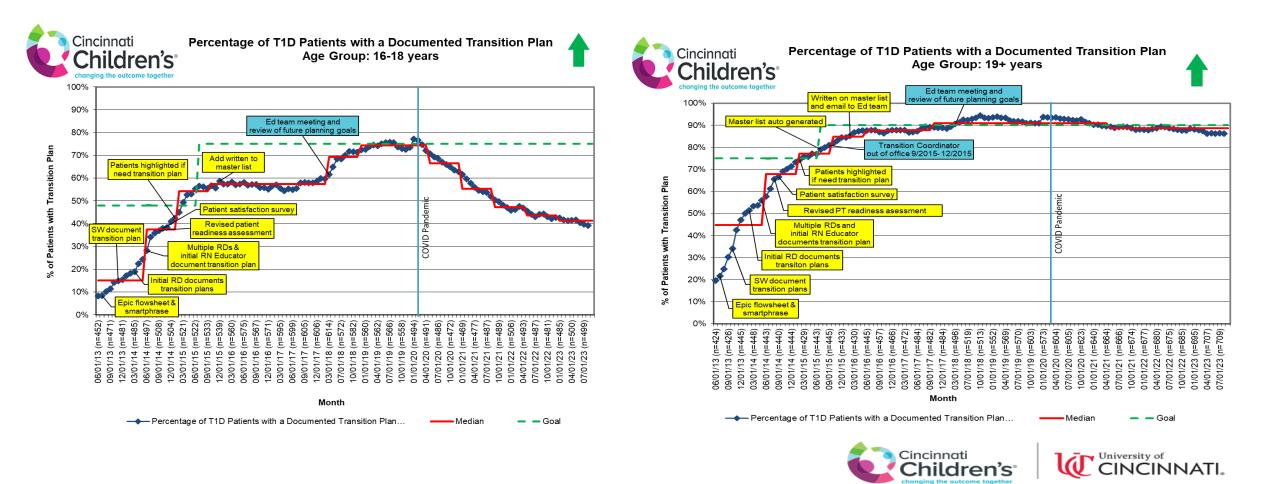


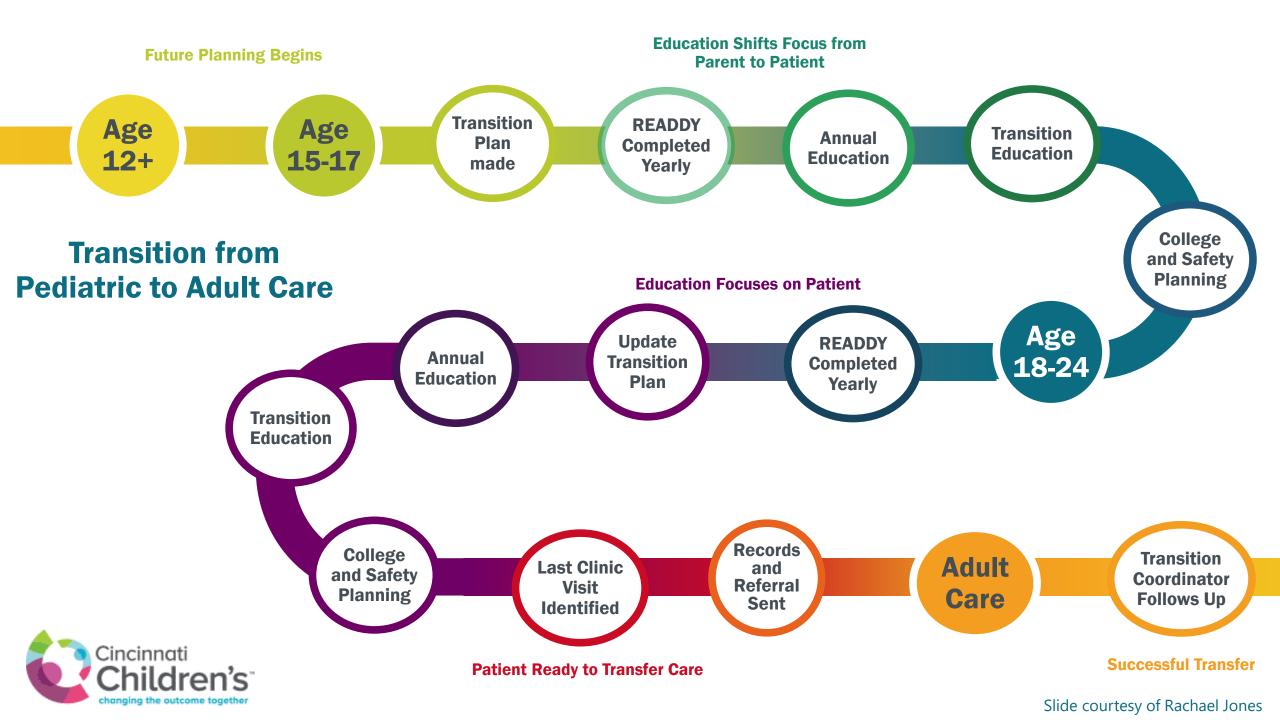
Transition Plan Completion Rates Active QI 2013-2016; Sustain through 11/2019





Post-Covid19: Decline in 16-18; Sustained Transition Plan Documentation \geq 19 years





Post-Transfer

	Patients that have been transferred for 1 year (n=48)
Sex	
Females	23 (48%)
Males	25 (52 %)
Race	
African American	13 (27%)
White	35 (73%)
Type of Diabetes	
Туре 1	41 (85%)
Туре 2	4 (8%)
Cystic Fibrosis related	2 (4%)
Insulin resistance	1 (2%)
Insurance Status	
Private	28 (58%)
Public	17 (35%)
Self-pay	3 (6%)
Mean Age at Transfer	22.10 years ± 2.19
Mean Duration of	10.81 years <u>+</u> 5.08
Diabetes at Transfer	

	Pediatric Care, n=48	Adult Care, n=40
Miean Hemeglobin A1c	8.70	8.59

Clinic visits 1 year prior to last pediatric appointment and 1 year after transfer

1 year prior	to last pediatric	visit <pre>I year af</pre>	ter transfer
5.4 3.27	P=0 2.77		P<0.0001 2.54 0.73
Mean total numb visits		nber of visits Mear roviders	n number of visits with educator
	Pediatric care N (%)	Adult Care N (%)	P-value
Documented foot exam (within 1 year)	Pediatric care	Adult Care	
Documented foot	Pediatric care N (%)	Adult Care N (%)	P-value
Documented foot exam (within 1 year)	Pediatric care N (%) 8 (17%)	Adult Care N (%) 40 (83%)	P-value <0.0001
Documented foot exam (within 1 year) LDL (within 2 years)	Pediatric care N (%) 8 (17%) 38 (79%)	Adult Care N (%) 40 (83%) 27 (56%)	P-value <0.0001 0.0278
Documented foot exam (within 1 year) LDL (within 2 years) TSH (within 1 year) Documented eye	Pediatric care N (%) 8 (17%) 38 (79%) 23 (48%)	Adult Care N (%) 40 (83%) 27 (56%) 21 (44%)	P-value <0.0001 0.0278 0.1025

Program Evaluation Since January 2022

- Confirmed transfer to adult care: N=197
 - Number of adult receivership practices: 39
 - Average time between last peds and first adult visit: 232 days
 - Mean age of transfer 23.1 years
 - High risk pregnancy transfer of care: 8

• In 2022, n= 91 transferred and (83/91) 91% had 2+ visits





Conclusions and Next Steps

- Interdisciplinary team successfully used Got Transition framework and QI methods to development a transition preparation program for AEA with T1D
- Increased documented transition plans over 6 years:
 - Increase from 15% to 75% among ages 16-18 years
 - Increase from and 20% to 90% for \geq 19 years
- Improvement sustained post-Covid in older age group, but performance declined in younger population
- Ongoing opportunities to enhance transition preparation and adult receivership



